PATENT APPLICATION

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B. Hilliard
1 of 3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of:

Gene M. NITSCHKE

Application No.: 09/411,642

Filed: October 4, 1999 Docket No.: 103045

For: METHOD AND SYSTEM TO ESTABLISH DEDICATED INTERFACES FOR THE MANIPULATION OF SEGMENTED IMAGES

BRIEF ON APPEAL

Appeal from Group 2173

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I. INTRODUCTION

This is an Appeal from an Office Action mailed June 3, 2002, finally rejecting claims 1-21 of the above-identified patent application.

A. Real Party in Interest

The real party in interest in this Appeal in the present application is XEROX CORPORATION, by way of an Assignment filed on October 4, 1999 and recorded at Reel 010309, Frame 0740.

B. Statement of Related Appeals and Interferences

There are presently no appeals or interferences, known to Appellants, Appellants' representative or the Assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

C. Status of Claims

Claims 1-21 are pending. Claims 1-21 are on appeal. Claims 1-21 are set forth in the attached Appendix. Claims 1, 10 and 12 are independent claims. Claims 2, 4 and 6-9 depend directly from claim 1. Claim 3 depends directly from claim 2 and indirectly from claim 1. Claim 4 depends directly from claim 1. Claim 11 depends directly from claim 10. Claims 13, 15, 16 and 19-21 depend directly from claim 12. Claim 14 depends directly from claim 13 and indirectly from claim 12. Claim 18 depends directly from claim 17 and indirectly from claim 12.

D. Status of Amendments

There are no amendments to the claims. Claims 1-21 are pending as originally filed.

II. SUMMARY OF THE INVENTION AND APPLIED REFERENCES

A. The Claimed Invention

The invention is directed to (1) a system that assembles a dedicated user interface that allows an input segmented image to be manipulated; (2) a storage medium that store information, the information controlling assembly of a dedicated user interface that allows manipulation of an input segmented image; and (3) a method of assembling a dedicated user interface for manipulation of an input segmented image.

Segmented images can contain segmentation classifiers that identify the image types of various portions of an image. For example, the segmentation classifier can indicate a particular portion of an image is a photograph, a half-tone region, a text region, a line art region, or any other image type. Thus, the segmented image can be any image having an associated portion of data or segmentation map containing segmentation classifiers corresponding to at least one portion of the image. This invention provides systems and methods for assembling a graphical user interface that is appropriate for image processing functions associated with a particular image type, and streamlines selection and subsequent image processing of segmented images. In various exemplary embodiments of the systems and methods according to this invention, as a user selection tool traverses an image, the system is able to determine what image type is associated with the coordinate in the image of the user's selection tool. Knowing the image type for the selected portion, the systems and methods of this invention can then assemble a tailored graphical user interface that contains image processing functions that are appropriate for that particular image type. For example, if a segmentation classifier indicates the selection tool is positioned over a color photograph portion of an image, the systems and methods of this invention select and assemble an appropriate grouping of image processing tools that are generally appropriate for processing color photographs.

The methods and systems of this invention assume the input image has been previously analyzed and a segmentation map has been generated for the image. The segmented image processing systems and methods according to this invention receive a segmented input image. The segmentation map associated with the segmented input image is then identified. The segmentation map is then mapped to the segmented input image. As a user traverses the segmented input image, for example with a selection tool such as a mouse, the position of the selection tool within the segmented input image is detected.

After detecting the position of the selection tool, a segment of the segmented input image is associated with the mouse position based on the segmentation map. Optionally, at this time the associated segment can be highlighted, for example, by using a dotted outline, to aid the user in identifying the segment corresponding to the position of the selection tool.

If the user desires to perform image processing on the segment associated with the current selection tool position, the user selects, for example, with the click of a mouse, the segment associated with the current selection tool position. Upon selecting a segment for image processing, the systems and methods of this invention input or otherwise retrieve the segmentation classifier associated with the selected segment. Based on the segmentation classifier, the systems and methods of this invention determine the available and/or appropriate image processing tool(s) associated with the segmentation classifier for the selected segment. An image processing graphical user interface is then assembled based on the image processing tools associated with the segmentation classifier. A user's selection of a widget within the graphical user interface is then detected and a corresponding image processing tool applied to the selected segment. The user then has the option of performing further image processing function to the selected segment, storing the updated image, undoing the image processing function, or selecting another segment for image processing.

Referring to the drawings, a segmented image is received by the segmented image processing system 100 from the image source 200 via the I/O interface 110. The segmented image, at the direction of the controller 130, is stored in the memory 120 for subsequent processing by the segmentation mapping circuit 140. The segmentation mapping circuit 140 identifies the segmentation map associated with the segmented input image. The identified segmentation map is then mapped to the input segmented image by the segmentation mapping circuit 140. This allows alignment of the image coordinates and an associated segmentation classifier.

Once the segmentation map has been mapped to the input segmented image, the segmented image is displayed on the display device 210. After displaying the segmented image on the display device 210, the controller 130 monitors the user input device 220 for input. In particular, the controller 130, in cooperation with segmentation mapping circuit 140, detects a user's input, for example a cursor position, in the segmented image. As the cursor moves throughout the segmented image, the segmentation mapping circuit 140, in cooperation with the segmentation selection circuit 170, determines the segment of the segmented image associated with the current cursor position based on the segmentation map.

For example, as a user traverses the segmented image with a mouse pointer, the segmented image processing circuit 100 could highlight the segment associated with the cursor position. The segmented image processing system 100 could generate a dotted line around the segment associated with the cursor position. Alternatively, the segmented image processing system 100 could use any known or later developed technique that is capable of conveying to a user that a particular segment has been detected that corresponds to the current cursor position.

The controller 130 monitors the user input device 220 until a segment is selected for image processing. For example, if the user input device 220 is a mouse, the user could click

the left mouse button to indicate that a user would like to select that segment for image processing.

A segmentation classifier identifies the type of image segment. For example, the segmentation classifier could identify the image segment as a photograph, a half-tone region, a text region, a line art region, etc. The segmentation map identifies data that contains the image classifiers for the image, and optionally, information as to the location, or boundaries, of each segment. For example, this could be a one-to-one correspondence of pixel-to-segment or a coordinate system that correspond to the boundaries of the segment.

When a selection command is received from the user input device 220, the controller 130 activates the segmentation selection circuit 170. The segmentation selection circuit 170, based on the segmentation map, selects the selected segment for image processing. Upon selection of a segment, the segmentation classifier association device 180 determines the segmentation classifier associated with the selected segment. As previously described, the segmentation classifier could be, for example, a photograph, a half-tone region, text region, a line art region, etc.

Once the segmentation classifier associated with the selected segment is identified, the image processing tool association device 150 determines the appropriate image processing tool or tools that correspond to the segmentation classifier.

The image processing tools or functions associated with the segmentation classifiers can be predefined, continuously updatable and/or user configurable. For example, if the segmentation classifier for the selected segment indicates that the selected segment is a color image/photograph, typical image processing functions performed on that type of segmentation classifier could be brightness, contrast, rotation, scaling, etc.

Alternatively, for example, if the image classifier indicates that the segment is a line art region, some of the selectable image processing tools could be error diffusion, color adjustment or threshold.

The user interface assembly device 160 retrieves the image processing tool identifications determined by the image processing tool association device 150 to be associated with the selected segmentation classifier. Having identified the image processing tools, the user interface assembly device 160 then assembles at least one selectable interface widget into a user interface based on the image processing tools associated with the segmentation classifier. This user interface is then displayed on the display device 210. When the controller 130 detects a selection of an image processing tool from the displayed user interface, the controller 130, in cooperation with memory 120, performs the selected image processing on the selected segment. The updated image, or segment, is then displayed on the display device 210.

This process of selecting segments, and subsequently processing the selected segments, continues until a user has completed the desired modifications of the input segmented image.

Fig. 7 illustrates an exemplary method of establishing dedicated interfaces for manipulation of images in accordance with the invention

B. The Applied References

1. U.S. Patent 5,787,194 to Yair

Yair is directed to an image processing apparatus for segmenting an unsegmented image into image portions containing single characters for subsequent storage and processing by an optical character recognition OCR apparatus. See col. 1, lines 8-14 of Yair. Yair discloses an apparatus for machine reading of printed or (primarily - see col. 4, lines 30-33) handwritten text. Also, see col. 3, last sentence, which refers to Fig. 1 as showing such an

apparatus. Yair discloses that an OCR input image may contain an arbitrary number of connected components, where each component could represent several characters joined together, a single character, a part of a character, noise, or any other piece of image. See col. 2, lines 24-28 of Yair. Yair also discloses that it is essential for any OCR application to handwritten data to be able to handle both connected and broken characters in the same field of data. See col. 1, lines 36-39 of Yair. Yair is directed to solving the problem of segmentation of a field into its individual characters, such as found in tax forms, zip codes, census forms and credit card slips. See col. 2, lines 1-7 of Yair. Yair segments his unsegmented input image into its single character components - see col. 4, lines 33-40. Examples of handwritten individual characters are shown in Figs. 6 and 7 of Yair. Yair has absolutely no disclosure, or suggestion, of, or the need for, a user interface for his image processor.

In col. 4, Yair starts with an unsegmented image, using an image capture device 100, such as an image capture camera or scanner. The unsegmented image is digitized and stored in the form of a bi-level (i.e., bitmap) image in a data storage device 110. The signal from the image capture device 100 is passed to a data processing system 120, which includes the data storage device 110, OCR module 130 and segmentation module 140. The segmentation module 140 takes the unsegmented binary input image and generates images which contain only a single handwritten character for input to the OCR module 130 (col. 4, lines 33-40).

2. U.S. Patent 6,341,183 to Goldberg

Goldberg is directed to CCD camera control and image acquisition. In particular, Goldberg provides an event-driven graphical user interface (GUI)-based image acquisition interface for the interactive data language (IDL) programming environment developed by Research Systems, Inc., which is designed for CCD camera control and image acquisition directly into the interactive data language environment. The functions performed by

Goldberg's device include CCD detector control, image display and manipulation, and file saving and loading. See col. 3, lines 60-64 of Goldberg. Columns 5-8 of Goldberg disclose image display and manipulation. These functions include zooming, scaling for display, point and region selection, lineout display, and color table display, gamma scaling, and background subtraction.

Goldberg does not deal with OCR. Goldberg has image processing tools, discussed below, but Goldberg fails to provide an image processing tool association circuit that determines one image processing tool corresponding to any segmentation classifier, let alone "the segmentation classifier" recited in the claims.

Goldberg provides a toolbox of various analytical tools, including (1) a Fourier-transform Alignment tool, (2) a Contrast tool; (3) a Wavefront tool; and (4) a Zernike Polynomial tool, all of which are used to facilitate the use of a phase-shifting point-diffraction interferometer. See cols. 8-11 of Goldberg. Goldberg displays an image, e.g., an optical interferometric image - see Fig. 2 - and provides for, and requires, input from a human user to function properly, but provides no tools directed to optical character recognition.

3. U.S. Patent 5,710,877 to Marimont

Marimont, which is commonly assigned (with this application) to Xerox Corporation, is concerned with communicating information to a human viewer about image objects, their spatial relationships, i.e., geometric and topological relationships, and the colors of their surfaces which a human viewer is able to quickly and accurately recognize and understand. To do this, a human viewer of an image must be able to compute geometric and topological information from the image robustly and efficiently - see col. 1, lines 24-32. Marimont generates a data structure representation of an original image that captures geometric and topological information about regions in the image and spatially indexes those regions. Marimont has both original image interface operations 210 and image structure map interface

operations 220. Interface operations 220 include the primitive operations needed to interact with an image map structure 500 to provide functionality provided by an image interaction system - see col. 12, lines 50-56 . Marimont is interested in accurate spatial indexing of regions of an image and provides user interaction with the structures (e.g., objects, regions, surfaces) in an original image - see col. 3, lines 13-17.

Marimont is directed to using an image as a medium of communication to a human viewer, not to machine reading of an image for optical character recognition or to analyzing an optical interferometric image.

4. U.S. Patent 6,026,182 to Lee

Lee discloses a process for compressing digital video signals involving an object-based digital video encoding process with error feedback. As discussed in col. 3, lines 48-61, Lee discloses a method of segmenting or identifying selected objects from other objects within a video frame. The objects may be of arbitrary configuration and preferably represent distinct image features in a display image. In one embodiment, a user forms an interior outline within the interior of object perimeter, e.g., by using a mouse or trackball. The user - formed interior outline is expanded automatically to form an exterior outline. Pixels between the interior outline and the exterior outline are classified according to predefined attributes. Figs. 17A and 17B show a functional block diagram of a precompression extrapolation method 400 for extrapolating image features of arbitrary configuration to a predefined configuration to facilitate compression.

5. U.S. Patent 6,341,183 to Mahoney

Mahoney is directed to analyzing image data, representing images containing text, to partition the image into running and non-running text regions and to further classify the non-running text regions as a horizontal sequence, a vertical sequence or a table. One aspect of Mahoney deals with a basic problem in image recognition--that of applying structural norms

in a top-down analysis. In top-down or logical structure analysis, a given page image is analyzed based upon functional interpretations of components of the page. Mahoney extracts a similar level of structure in a bottom-up approach based on a technique that partitions a page image into two principal types of regions: running text and non-running text. Once the non-running text regions of the document are identified, they may be further analyzed to identify tabular regions in the non-running text. The techniques employed in Mahoney avoid problems with conventional top-down or logical structure analysis methods, and allow the further characterization of non-running text regions identified within an image. Thus, Mahoney supports format analysis and selective scanning for text recognition.

III. THE ISSUES ON APPEAL

1. Are claims 1-3, 6, 9-14, 16 and 21 properly rejected under 35 USC §103(a) as unpatentable over U.S. Patent 5,787,194 to Yair in view of U.S. Patent 6,341,183 to Goldberg?

2. Are claims 4, 5, 15 and 20 properly rejected under 35 USC §103(a) as unpatentable over U.S. Patent 5,787,194 to Yair in view of U.S. Patent 6,341,183 to Goldberg and further in view of U.S. Patent 5,710,877 to Marimont?

3. Are claims 7, 17 and 18 properly rejected under 35 USC §103(a) as unpatentable over U.S. Patent 5,787,194 to Yair in view of U.S. Patent 6,341,183 to Goldberg and further in view of U.S. Patent 6,026,182 to Lee?

4. Are claims 8 and 19 properly rejected under 35 USC §103(a) as unpatentable over U.S. Patent 5,787,194 to Yair in view of U.S. Patent 6,341,183 to Goldberg and further in view of U.S. Patent 6,009,196 to Mahoney?

IV. GROUPING THE CLAIMS ON APPEAL

Claims 1, 3, 9, 10, 12, 14 and 21 stand or fall together but are otherwise separately patentable from the remaining claims. Claims 2, 11 and 13 stand or fall together, but are

otherwise separately patentable from the remaining claims. Claims 6 and 16 stand or fall together, but are otherwise separately patentable from the remaining claims. Claims 4, 5, 15 and 20 stand or fall together but are otherwise separately patentable from the remaining claims. Claims 8 and 19 stand or fall together but are otherwise separately patentable. Claims 7, 17 and 18 stand or fall together but are otherwise separately patentable. Claims 8 and 9 stand or fall together but are separately patentable. This grouping parallels the grouping of claims in the rejections of record. The reasons why these groups of claims are separately patentable is presented below, in Section V.

V. LAW - 35 USC §103(a) (Obviousness)

In rejecting claims under 35 USC 103, it is incumbent on the examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the

modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish prima facie obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). It is well settled that a rejection based on 35 USC 103 must rest on a factual basis, which the Patent and Trademark Office has the initial duty of supplying. In re GPAC, Inc., 57 F.3d 1573, 1582, 35 USPQ2d 1116, 1123 (Fed. Cir. 1995). A showing of a suggestion, teaching, or motivation to combine the prior art references is an "essential evidentiary component of an obviousness holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232(Fed. Cir. 1998). This evidence may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. See Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). However, the suggestion more often comes from the teachings of the pertinent references. See In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459(Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." See In re Dembiczak, 175 F.3d at 1000, 50 USPQ2d at 1617. However, the suggestion to combine need not be express and "may come from the prior art, as filtered through the knowledge of one skilled in the art." Motorola, Inc. v. Interdigital Tech. Corp., 121 F.3d 1461, 1472, 43 USPQ2d 1481, 1489(Fed. Cir. 1997).

It is impermissible for an examiner to engage in hindsight reconstruction of the claimed invention using appellant's structure as a template and selecting elements from references to fill the page. The references themselves must provide some teaching whereby

the appellant's combination would have been obvious. In re Gorman, 911 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir, 1991). That is, something in the prior art as a whole must suggest the desirability, and thus obviousness, of making the combination. See, In re Beattie, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992); Lindemann Machinenfabrik GMBH v. American Hoist and Derrick Co., 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984).

VI. ARGUMENT

A. Claims 1-3, 6, 9-14, 16 and 21 Ares Not Obvious over Yair in view of Goldberg

i. Claimed Features

Claim 1 recites (1) a system that assembles a dedicated user interface that allows an input segmented image to be manipulated comprising (a) a segmentation classification association circuit that associates a segmentation classifier and at least one segment of the input segmented image, and (b) an image processing tool association circuit that determines at least one image processing tool corresponding to the segmentation classifier.

Claim 2 recites, in addition to the features recited in claim 1, a user interface assembly circuit that assembles at least one selectable interface widget into at least one user interface based on the at least one image processing tool corresponding to the segmentation classifier.

Claim 3 recites, in addition to the features recited in claim 2, that the system modifies the at least one segment based on a selection of the at least one image processing tool associated with the at least one user interface.

Claim 6 recites, in addition to the features of claim 1, a segmentation selection circuit that selects the at least one segment.

Claim 9 recites, in addition to the features of claim 1, that the dedicated user interface is a graphical user interface comprising at least one of a drop-down menu, a pull-down menu, a radio button, a tab button, a segment display area or a slide bar.

Claim 10 recites (1) a storage medium that stores information, the information controlling assembly of a dedicated user interface that allows manipulation of an input segmented image and comprising (a) information that associates a segmentation classifier and at least one segment of the input segmented image, and (b) information that determines at least one image processing tool corresponding to the segmentation classifier.

Claim 11 recites, in addition to the features of claim 10, information that assembles at least one user interface based on the at least one image processing tool corresponding to the segmentation classifier.

Claim 12 recites (1) a method of assembling a dedicated user interface for manipulation of an input segmented image comprising (a) determining a segmentation classifier associated with at least one segment of the input segmented image, and (b) associating at least one image processing tool with the at least one segment of the input segmented image.

Claim 13 recites, in addition to the features of claim 12, assembling at least one selectable interface widget into at least one user interface based on the at least one image processing tool associated with the segmentation classifier.

Claim 14 recites, in addition to the features of claim 13, modifying the at least one segment based on a selected image processing tool.

Claim 16 recites, in addition to the features of claim 12, selecting at least one segment.

Claim 21 recites, in addition to the features of claim 12, that the dedicated user interface is a graphical user interface comprising at least one of a drop-down menu, a pull-down menu, a radio button, a tab button, a segment display area or a slide bar.

ii. Analysis regarding claims 1, 3, 6, 9, 10, 12, 14, 16 and 21

Yair is directed to an image processing apparatus for segmenting an image into image portions containing single characters for subsequent storage and processing by an optical character recognition OCR apparatus. See col. 1, lines 8-14 of Yair. Yair discloses an apparatus for machine reading of printer or handwritten text. See col. 3, last sentence, which refers to Fig. 1 as showing such an apparatus. Yair discloses that an OCR input image may contain an arbitrary number of connected components, where each component could represent several characters joined together, a single character, a part of a character, noise, or any other piece of image. See col. 2, lines 24-28 of Yair. Yair also discloses that it is essential for any OCR application to handwritten data to be able to handle both connected and broken characters in the same field of data. See col. 1, lines 36-39 of Yair. Yair is directed to solving the problem of segmentation of a field into its individual characters, such as found in tax forms, zip codes, census forms and credit card slips. See col. 2, lines 1-7 of Yair. Examples of handwritten individual characters are shown in Figs. 6 and 7 of Yair. Yair has absolutely no disclosure or suggestion of, or the need for, a user interface for his image processor.

Yair only employs machine reading of an input image and segments an unsegmented image into its single character components. Yair contains no disclosure or suggestion of, or any need for, a user interface, let alone a dedicated used interface or "a system that assembles a dedicated user interface that allows an input segmented image to be manipulated," as recited in claim 1.

Nor does Yair disclose "a dedicated user input that allows an input segmented image to be manipulated." Yair starts with an image capture device 100, and then uses a segmentation module 140, shown in general terms in Fig. 1 and in detail in Fig. 2. Yair is directed to segmenting an unsegmented "OCR input image" - see col. 2, line 24. The OCR input image is inputted via an "image capture device 100 of any suitable type, e.g., an optical

camera or scanner" - see the sentence bridging columns 3 and 4 of Yair. In col. 4, lines 1-10, Yair discloses that the input image is digitized and stored in the form of a binary image comprising rows and columns of binary pixels in a suitable format in a data storage device 110. The signal from the input device 100 is passed to a data processing system 120, which includes the data storage device 110, the OCR module 130 and the segmentation module 140.

It is clear from this reading of Yair, that what is input to Yair is an unsegmented image that is sent to segmentation module 140. As recited in claims 1-3, 6, 9-14, 16 and 21, the claimed system, storage medium and method assembles a dedicated user interface that allows an input segmented image to be manipulated, whereas Yair does not have (1) a dedicated user interface, or (2) a input in the form of a segmented image which a dedicated user interface can manipulate. Moreover, Yair has not disclosed or suggested any need to provide a dedicated user interface. Yair's device works as designed, without any user interface, as an apparatus for machine reading of handwritten printed or handwritten text.

Moreover, the allegation in the final rejection that the recited "segmentation classification association circuit" is found in Yair overlooks the claim language itself which (regarding claim 1) actually recites "a segmentation classification association circuit that associates a segmentation classifier and at least one segment of the input segmented image", is not persuasive. This allegation overlooks the fact that the classification logic 220 in Yair is used to segment the unsegmented image input to the segmenter 140, not to associate a segmentation classifier and at least one segment of the input segmented image, as recited. Yair's classification portion or segmenter 140 is not working on a segmented image. Rather, it is segmenting an unsegmented image.

Similar language is recited in claims 10 and 11 (e.g., "information that associates a segmentation classifier and at least one segment of the input segmented image"), and similar

language is recited in claim 12 (e.g., "determining a segmentation classifier associated with at least one segment of the input segmented image).

Accordingly, Yair does not teach a segmentation classification association circuit that associates a segmentation classifier and at least one segment of an input segmented image, which are features recited in claims 1-3, 6, 9-14, 16 and 21, as asserted in the Office Action. At best, Yair teaches segmenting an unsegmented input image using, among other things, classification logic.

Yair also does not disclose "an image processing tool association circuit that determines at least one image processing tool corresponding to the image classifier," as recited in claims 1-3, 6, 9-14, 16 and 21. The Office Action admits this on page 3, lines 3-6.

In an attempt to supply the admittedly missing features, the office Action turns to Goldberg.

Goldberg provides a graphical user interface-based image acquisition interface for CCD camera control and image acquisition. In particular, Goldberg provides an event driven graphical user interface (GUI)-based image acquisition interface for the interactive data language (IDL) programming environment developed by Research Systems, Inc., which is designed for CCD camera control and image acquisition directly into the interactive data language environment. The functions performed by Goldberg's device include CCD detector control, image display and manipulation, and file saving and loading. See col. 3, lines 60-64 of Goldberg. Columns 5-8 of Goldberg disclose image display and manipulation. These functions include zooming, scaling for display, point and region selection, lineout display, and color table display, gamma scaling, and background subtraction.

Goldberg has nothing to do with OCR or image segmentation. Although Goldberg has image processing tools, Goldberg fails to provide an image processing tool association

circuit that determines one image processing tool corresponding to any segmentation classifier, let alone "the segmentation classifier" recited in claim 1.

Actually, Goldberg is directed to solving a problem that does not appear in Yair. Goldberg is directed to alignment of an interferometer involving image analysis. The alleged rationale for combining Goldberg with Yair is to provide "real time data analysis support for images acquired during alignment of image acquisition analysis." - see page 3, last three lines of the office Action. However, Yair does not disclose any need for such a graphical user interface. Nor does Yair disclose any need for alignment of an interferometer, or "alignment of image acquisition" or any "alignment of image acquisition analysis."

The Office Action fails to provide any proper motivation to combine these two disparate references. Federal Circuit case law makes it abundantly clear that a showing of motivation to combine references must be clear and particular, and that broad, conclusory statements about the teaching of multiple references, standing alone, are not "evidence." The Office Action must also demonstrate that modifying one reference in view of another reference is even feasible. Moreover, the case law requires that for motivation to be proper, showing that something is feasible is not enough. Just because something is feasible does not mean that it is desirable or that one of ordinary skill in the art would be motivated to do what is feasible. The Federal Circuit has repeatedly pointed out that motivation to combine references requires a showing not just of feasibility, but also of desirability.

The Office Action completely fails all of the aforementioned case law requirements to constitute a showing of proper motivation to combine Yair and Goldberg. In fact, the Office Action fails to even indicate what would motivate one of ordinary skill in the art to combine these two references. Rather, as noted above, the Office Action merely states what will happen if the references are combined. The Office Action alleges that the combination would provide real-time data analysis support for images acquired during the alignment of image

acquisition analysis. However, Yair does not need real-time data analysis support for images acquired during the alignment of an interferometer that use "several alignment procedures that involve image-processing and analysis of the images recorded during alignment" - see col. 2, lines 60-64 of Goldberg.

Yair is directed to a simple machine readable digital image that does not contemplate or need a dedicated user interface or the sophisticated image processing tools of Goldberg that are involved with Goldberg's interferometer alignment procedures. Moreover, there is no user input in Yair's system. Yair captures an image, segments the image into its single character components, OCR's the segmented (into a single character) image and stores the image. Yair's device presumably works well without any user interface. There is simply no need for a dedicated user interface in Yair. Accordingly, for the aforementioned reasons, Applicant respectfully contends that the Office Action provides no proper motivation to combine Yair and Goldberg.

Moreover, even if it were feasible and desirable to combine these two references, which the Office Action has not demonstrated, the combination would not render the claimed invention obvious because, even if combined, the combination would still not have the features recited in claim 1, including a segmented image, "a segmentation classification association circuit that associates a segmentation classifier and at least one segment of the input segmented image", or an image processing tool association circuit that determines at least one image processing tool corresponding to the segmentation classifier.

Additionally, the assertion in the final rejection that one could incorporate a toolbox of various analytical tools into Yair is based solely on feasibility, not desirability. Yair does not need, nor can Yair use, an image analysis toolbox with the four tools disclosed by Goldberg, i.e., with "the Fourier-transform Alignment Tool, the Contrast Tool, the Wavefront Tool, and the Zernike Polynomial Tool" - See cols. 8-11. The Fourier transform Alignment

tool is used for alignment purposes; the Contrast tool is used for interference fringe contrast determination and averages the contrast of the last fifteen images to determine if the contrast of a given image is improving, worsening or has reached a maximum; the Wavefront tool is used to reveal aberrations in the interferometer optical system (not-in real time, but if wavefront calculations can be done in real time, Goldberg expressly teaches they would be performed without user instigation- see col. 10, lines 60-63; and the Zernike Polynomial tool is used to determine of the defocus, astigmatism, coma, spherical aberration of the optical system under test.

Yair has no optical system under test and needs none of these tools. Under these circumstances, the final Office Action fails to demonstrate that one of ordinary skill in the art would desire to combine Goldberg with Yair to provide any dedicated user interface for Yair and especially the one disclosed by Goldberg which deals with interferometric analysis used for CCD camera control.

Accordingly, neither Yair nor Goldberg, alone or in combination, disclose the features of claims 1,10 or 12 for the reasons stated above.

iii. Analysis regarding claims 2, 11 and 13

Claims 2, 11, and 13 further distinguish over Yair and Goldberg. Claim 2 recites the additional feature of a user interface assembly circuit that assembles at least one selectable interface widget into at least one user interface based on the at least one image processing tool corresponding to the segmentation classifier. Neither Yair nor Goldberg disclose or suggest an image processing tool corresponding to an image segmentation classifier. The Office Action fails to demonstrate a proper motivation for combining these two references, and even if combined, because of the absence of other claimed features from both references, for reasons set forth above, the reference combination would not render the claimed invention obvious.

Yair admittedly has no disclosure of an image processing tool association circuit that determines at least one image processing tool corresponding to the segmentation classifier, and Goldberg does not even disclose a segmentation classifier. Moreover, there is no proper motivation to combine these references, as pointed out above.

Similar comments apply to claims 11 and 13, which recite similar features to that recited in claim 2. It is noted that claim 11 does not recite a widget.

iv. Analysis regarding claims 6 and 16

Claim 6 depends from claim 1 and claim 16 depends from claim 12. Neither Yair nor Goldberg discloses the additional feature recited in these claims, e.g., "further comprising a segmentation selection circuit that selects the at least one segment." Yair, which is alleged in the Office Action to show this feature, only discloses a segmentation classifier. See Fig. 2, and the associated disclosure of Yair. Yair does not associate an image processing tool which corresponds to the segmentation classifier (as recited in claim 1) nor does Yair associate a segmentation classifier and at least one segment of the input segmented image. Yair does not segment a segmented image and classify the re-segmented image.

v. Conclusion

For at least the reasons outlined above, the combination of Yair and Goldberg fails to teach, disclose or suggest all of the features of claims 1-3, 6, 9-14, 16 and 21.

Lastly, Applicant respectfully points out that the reason the final Office Action presents for combining these references, i.e., "the system would enhance by providing more varieties and selectable processing tools in GUI-based interface to end user wherein the user has capable of selecting tool based on his/her own desired manner" is the type of broad, general rationale that the Federal Circuit indicates does not provide proper motivation to combine references, especially here, where the main reference, Yair, does not employ a user interface and one is not needed to make the Yair device work as disclosed.

Accordingly, the final rejection fails to make out a prima facie case of obvious of the invention recited in claims 1-3, 6, 9-14, 16 and 21, and this rejection should be reversed.

B. Claims 4, 5, 15 and 20 Are Not Obvious over Yair in view of Goldberg and further in view of Marimont

i. Claim Features

Claim 4 depends from claim 1 and additionally recites a segmentation mapping circuit that determines the at least one segment based on a position of a user input device in the input segmented image.

Claim 5 recites the system of claim 4, wherein the segment mapping circuit highlights the at least one segment based on the position of a user input device in the input segmented image.

Claim 15 depends from claim 12 and additionally recites determining at least one segment based on a position of a user input device.

Claim 20 depends from claim 12 and additionally recites highlighting the at least one segment of the input segmented image.

ii. Analysis

The Yair-Goldberg reference combination does not render claims 1 and 12 obvious for the reasons stated above. The final Office Action alleges that Marimont discloses that the feature "of the segment mapping circuit that determines the at least one segment based on a position of a user input device in the inputted segmented image" as the technique of the discovery of a data structure representation of an image called an image structure map (ISM) that accurately and explicitly represents the geometric and topological properties of an image and that allows for efficient and accurate spatial indexing of regions of an image. The Office Action asserts that the input source may be directed by a human user or by an automatic operation based under control of a processor.

The final Office Action then concludes that it would be obvious to modify the Yair-Goldberg reference combination "to include the limitation of the segment mapping circuit highlights the at least one segment based on the position of a user input device by Marimont . . . [to] . . .enhance by signaling the user to known where is the location of the image structure map from which user will interact with."

This combination of references is based on nothing but hindsight. As noted above, Yair does not need a user interface and there is no proper motivation for a skilled worker to provide one for Yair's system. The Yair-Goldberg reference combination is improper for the reasons stated above. Even if a Yair-Goldberg were proper (which it is not), it would apparently concern optical character recognition of handwritten or printed characters. Goldberg has nothing to do with optical character recognition of handwritten or printed characters, nor does Marimont. The Office Action fails to demonstrate any motivation for a skilled worker to combine Marimont with Yair and Goldberg and has not shown that such a reference combination is feasible, let alone desirable.

The Office Action has started with an OCR image analysis system that needs no user interface and is now modifying that OCR image analysis system with Marimont which discloses tools permit a user to directly interact with both an original image and a version of the original image generated from the image data structure, features that are not needed or wanted in Yair. Furthermore, what is actually recited in claims 4, 5, 15 and 20 is an association of a segmentation classifier and at least one segment of the input segmented image, something not wanted or needed in Yair.

One of ordinary skill in the art would not even look to Marimont to modify Yair for several reasons. As noted above, Marimont is concerned with communicating information to a human viewer about image objects, their spatial relationships, i.e., geometric and topological relationships, and the colors of their surfaces that a human viewer is able to

quickly and accurately recognize and understand. To do this, a human viewer of an image must be able to compute geometric and topological information from the image robustly and efficiently - see col. 1, lines 24-32. Marimont is directed to using an image as a medium of communication to a human viewer, not to machine reading of an image for optical character recognition.

Applicant respectfully submits that Marimont is directed to a decidedly different type of image analysis as are Yair and Goldberg and that one of ordinary skill in the art would have no reason to combine the teachings of these disparate references. Moreover, in contradiction to what was stated above in the final Office Action, Applicant respectfully points out that while Marimont's user may further invoke automatic operations on the original image data structure that produce region data, such as signal property descriptors and boundary data, that may be used to update the image structure map, Marimont is directed to using both automatic operations and user input. Marimont expressly discloses that an image interaction system organized in this manner takes full advantage of automatic computation methods to capture the geometric and topological properties of an image while permitting a user to employ human perceptual skills to augment the automatic operations. Marimont teaches that this combination of system elements provides much more powerful interaction with an original image than merely through the pixel data of the image. See Marimont, col. 4, lines 30-53. Thus, the statement in the final Office Action that the input signal source may be directed by a human user or by an automatic operation under control of a processor is at best misleading. Marimont actually teaches using both automatic and human user image interaction are required.

Additionally, as noted above, Goldberg is not a properly combined with Yair and even if combined with Yair, would not result in the claimed invention. Moreover, there is no

proper motivation to modify Goldberg with Marimont because Goldberg has no image structure map with which a user may interact

The alleged rationale for combining these references, i.e., "the system would enhance by permitting user interaction with the structure in an original image through image structure mapping" is not only an improper, broad, general conclusionary statement that does not constitute evidence of provide proper motivation to combine the applied references, but is also incorrect because Yair's system would not be enhanced in any way by Goldberg or Marimont, especially because Marimont is directed to image appearance to a human.

iii. Conclusion

For at least the reasons outlined above, the combination of Yair, Goldberg and Marimont fails to teach, disclose or suggest all of the features of claims 1-21. Nor has the Office Action provided evidence establishing a prima facie case of obviousness of claims 1-21 based on Yair, Goldberg and Marimont. Thus, the combination of Yair, Goldberg and Marimont fails to render obvious the subject matter of claims 1-21 under 35 U.S.C. §103(a). Reversal of the rejection of claims 4, 5, 15 and 20 under 35 U.S.C. §103(a) as unpatentable over the combination of Yair, Goldberg and Marimont is respectfully solicited.

C. Claims 7, 17 and 18 Are Not Obvious over Yair in view of Goldberg and further in view of Lee

i. Claim Features

Claim 7 recites that the image processing tool association circuit determines the at least one image processing tool based on at least one of predefined configurable association data, updatable configurable association data or user configurable association data.

Claim 17 depends from claim 12 and further recites determining at least one image processing tool based on at least one of predefined configurable association data, updatable configurable association data or user configurable association data.

Claim 18 depends from claim 17 and further recites updating the user configurable association data.

ii. Analysis

Claims 7, 17 and 18 are patentable over Yair and Goldberg for the reasons stated above regarding claims 1 and 12. Moreover, Lee does not supply the deficiencies outlined above in Yair and Goldberg. Therefore, for these reasons alone, claims 7, 17 and 18 patentably define over Yair, Goldberg and Lee.

Lee is directed to compressing digital video signals, and includes a method of segmenting or identifying selected objects from other objects within a video image frame. A user forms an interior outline within the interior object perimeter and the interior outline is expanded automatically to form an exterior outline. See col. 3. lines 49-67 of Lee. The segmentation method operates on motion pictures and tracks objects in subsequent frames.

The Final Office Action fails to provide any proper motivation to modify the combination of Yair and Goldberg based on Lee. Instead, the Office Action merely states what would result from such a combination of references, which allegedly is a predefined configuration tool available to image processing toolbox end user.

This completely violates the requirements of the case law cited above, which requires that the Office Action provide proper motivation to combine these references, including not only the feasibility of the combination, but also desirability of the combination.

Moreover, the Office Action fails to demonstrate why one of ordinary skill in the art would desire to modify Yair, which already has segmented the handwriting image, by using Lee's video image compression technique using a segmentation which starts with a hand drawn interior outline and expands it automatically.

Moreover, even if the references were combined, the Office Action fails to demonstrate that the segmentation techniques of Yair, Goldberg and Lee are compatible, or

how they would work when combined, let alone why the combined image segmentation would be desirable.

iii. Conclusion

For at least the reasons outlined above, the combination of Yair, Goldberg and Lee fails to teach, disclose or suggest all of the features of claims 7, 17 and 18. Nor has the Office Action met the standards required by the APA or provided evidence establishing a prima facie case of obviousness of claims 7, 17 and 18 based on Yair, Goldberg and Lee. Thus, the combination of Yair, Goldberg and Lee fails to render obvious the subject matter of claims 7, 17 and 18 under 35 U.S.C. §103(a), and this rejection should be reversed.

D. Claims 8 and 19 Are Not Obvious over Yair in view of Goldberg and further in view of Mahoney

i. Claim Features

Claim 8 depends from claim 1 and recites that the segmentation classifier corresponds to at least one of a photographic region, a half-tone region, a text region, a line art region, a black and white region or a color region.

Claim 19 depends from claim 12, and recites that the segmentation classifier corresponds to at least one of a photographic region, a half-tone region, a text region, a line art region, a black and white region or a color region.

ii. Analysis

Mahoney is directed to analyzing image data that represents images containing text, to partition the image data into running and non-running text regions and to further classify the non-running text regions as a horizontal sequence, a vertical sequence or a table as a preliminary step to optical character recognition. Yair does not need this preliminary step added to the disclosed device because Yair has already selected the handwritten characters that the disclosed OCR system works with. Separating text characters into running and non-

running types will add nothing to Yair, which is primarily concerned with handwritten characters in tax forms, zip codes, census forms and credit card slips.

Moreover, the alleged reason for combining these three references is "the system would enhance by providing more enhanced classifier tools to end user." This is not a clear and particular motivation showing, but rather, a broad conclusory statement about the teaching of these multiple references, which is not proper evidence to motivate one of ordinary skill in the art to desire to modify the references." See Dembiczak, 175 F.3d at 1000, 50 USPQ2d at 1617.

The final Office Action also fails to make out a prima facie case of obviousness because it does not provide proper motivation to combine Mahoney with Yair and Goldberg. In fact, the final Office Action gives no reason to combine the references. Instead, the final Office Action just states what would happen if the references were to be combined, i.e., that the combination would provide more enhanced classifier tools to an end user.

The Office Action fails to demonstrate that combining these references is feasible and fails to demonstrate that combining these reference would be desirable. Mahoney is directed to page layout analysis, which is taught by Mahoney to be divided into two broad categories, i.e., geometric layout analysis and logical structure analysis. See col. 1, lines 52-67 of Mahoney. The Office Action fails to demonstrate that page layout analysis in general, or that either of these page layout analyses categories is relevant to Yair's optical character recognition of handwritten data or printed data, or to Goldberg's alignment of an interferometer, for example.

Applicant respectfully submits that one of ordinary skill in the art would not have found it feasible and desirable to modify Yair and Goldberg in view of Mahoney, let alone to have picked only a certain portion of Mahoney to modify the combination of Yair and Goldberg. The only motivation to combine these references is improper hindsight learned

from reading Applicant's disclosure, and this is not a proper basis on which to combine references in a rejection based on 35 USC §103(a).

iii. Conclusion

Claims 8 and 19 are patentable over Yair and Goldberg for at least the reasons stated above regarding claims 1 and 12. Additionally, Mahoney does not cure the defects in the combination of Yair and Goldberg. Thus, for the reasons above, claims 8 and 19 patentably define over Yair, Goldberg and Mahoney.

For at least the reasons stated above, the combination of Yair, Goldberg and Mahoney fails to teach, disclose or suggest all of the features of claims 8 and 19. The Office Action has not provided evidence establishing a prima facie case of obviousness of claims 8 and 19 based on Yair, Goldberg and Mahoney. Thus, the combination of Yair, Goldberg and Mahoney fails to render obvious the subject matter of claims 8 and 19 under 35 U.S.C. §103(a). Reversal of the rejection of claims 8 and 19 as unpatentable over the combination of Yair, Goldberg and Mahoney is respectfully solicited.

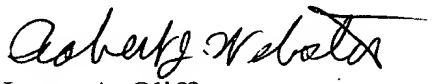
VII. CONCLUSION

A fair, balanced review of the rejections of record in the final Office Action reveals that the final Office Action fails to make a prima facie case of obviousness of the claimed invention over the applied references. In fact, the only rationale for combining the applied references is improper hindsight reconstruction of the claimed invention based solely on Applicant's disclosure. Claims 1-3, 6, 9-14, 16 and 21 are not obvious under 35 USC §103(a), and thus are patentable over, Yair in view of Goldberg; claims 4, 5, 15 and 20 are not obvious under 35 USC §103(a), and thus are patentable over, Yair in view of Goldberg and further in view of Marimont; claims 7, 17 and 18 are not obvious under 35 USC §103(a), and thus are patentable over Yair in view of Goldberg and Lee; and claims 8 and 19 are not

obvious under 35 USC §103(a), and therefore are patentable over, Yair in view of Goldberg and further in view of Mahoney.

The Honorable Board is requested to reverse the rejections set forth in the final Office Action and return the application to the Examiner to consider U.S. Patent 5,802,203, which was supplied in an Information Disclosure Statement to the Examiner, but which the Examiner has not considered on the merits, despite a number of requests to do so, and pass this case to issue.

Respectfully submitted,



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November 21, 2002

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VIII. CLAIMS ON APPEAL

1. A system that assembles a dedicated user interface that allows an input segmented image to be manipulated comprising:

a segmentation classification association circuit that associates a segmentation classifier and at least one segment of the input segmented image; and

an image processing tool association circuit that determines at least one image processing tool corresponding to the segmentation classifier.

2. The system of claim 1, further comprising a user interface assembly circuit that assembles at least one selectable interface widget into at least one user interface based on the at least one image processing tool corresponding to the segmentation classifier.

3. The system of claim 2, wherein the system modifies the at least one segment based on a selection of the at least one image processing tool associated with the at least one user interface.

4. The system of claim 1, further comprising a segmentation mapping circuit that determines the at least one segment based on a position of a user input device in the input segmented image.

5. The system of claim 4, wherein the segment mapping circuit highlights the at least one segment based on the position of a user input device in the input segmented image.

6. The system of claim 1, further comprising a segmentation selection circuit that selects the at least one segment.

7. The system of claim 1, wherein the image processing tool association circuit determines the at least one image processing tool based on at least one of predefined configurable association data, updatable configurable association data or user configurable association data.

8. The system of claim 1, wherein the segmentation classifier corresponds to at least one of a photographic region, a half-tone region, a text region, a line art region, a black and white region or a color region.

9. The system of claim 1, wherein the dedicated user interface is a graphical user interface comprising at least one of a drop-down menu, a pull-down menu, a radio button, a tab button, a segment display area or a slide bar.

10. A storage medium that stores information, the information controlling assembly of a dedicated user interface that allows manipulation of an input segmented image and comprising:

information that associates a segmentation classifier and at least one segment of the input segmented image; and

information that determines at least one image processing tool corresponding to the segmentation classifier.

11. The storage medium of claim 10, further comprising information that assembles at least one user interface based on the at least one image processing tool corresponding to the segmentation classifier.

12. A method of assembling a dedicated user interface for manipulation of an input segmented image comprising:

determining a segmentation classifier associated with at least one segment of the input segmented image; and

associating at least one image processing tool with the at least one segment of the input segmented image.

13. The method of claim 12, further comprising assembling at least one selectable interface widget into at least one user interface based on the at least one image processing tool associated with the segmentation classifier.

14. The method of claim 13, further comprising modifying the at least one segment based on a selected image processing tool.

15. The method of claim 12, further comprising determining at least one segment based on a position of a user input device.

16. The method of claim 12, further comprising selecting at least one segment.

17. The method of claim 12, further comprising determining at least one image processing tool based on at least one of predefined configurable association data, updatable configurable association data or user configurable association data.

18. The method of claim 17, further comprising updating the user configurable association data.

19. The method of claim 12, wherein the segmentation classifier corresponds to at least one of a photographic region, a half-tone region, a text region, a line art region, a black and white region or a color region.

20. The method of claim 12, further comprising highlighting the at least one segment of the input segmented image.

21. The method of claim 12, wherein the dedicated user interface is a graphical user interface comprising at least one of a drop-down menu, a pull-down menu, a radio button, a tab button, a segment display area or a slide bar.

AF/2700

Xerox Docket No. D/98389

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Gene M. NITSCHKE

On Appeal from Group: 2173

Application No.: 09/411,642

Examiner: C. Thai

Filed: October 4, 1999

Docket No.: 103045

For: METHOD AND SYSTEM TO ESTABLISH DEDICATED INTERFACES FOR THE MANIPULATION OF SEGMENTED IMAGES

APPEAL BRIEF TRANSMITTAL

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

Attached hereto are three (3) copies of our Brief on Appeal in the above-identified application.

The Director is hereby authorized to charge Deposit Account No. 24-0037 in the amount of Three Hundred Twenty Dollars ($320.00) in payment of the Brief fee under 37 C.F.R. 1.17(f). In the event of any underpayment or overpayment, please debit or credit our Deposit Account No. 24-0037 as needed in order to effect proper filing of this Brief.

For the convenience of the Finance Division, two additional copies of this transmittal letter are attached.

Respectfully submitted,

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Registration No. 27,075

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Date: November 21, 2002

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Xerox Docket No. D/98389

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